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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,434

08/23/2006

Yoshio Katsuda

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EXAMINER

JOYNER, KEVIN

ART UNIT

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1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,434	Applicant(s) KATSUDA ET AL.	
	Examiner KEVIN C. JOYNER	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on August 15, 2005. It is noted, however, that applicant has not filed a certified copy of the 2005-233853 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 2 and 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 contains parenthetical phrases that are narrative in scope and thus renders the claim unclear as to the exact limitations of said claim. More specifically, the phrase, "hereinafter simply referred to as "mesh-like chemical-retaining fibers" renders the claim indefinite. The Office suggests the Applicant to amend the claim as though it reads:

A chemical volatilization device for rotating a chemical retainer made of fibers as
a material with a rotary drive device based on employing a chemical
retainer comprising:

A chemical mesh fiber in the form of a regular mesh in two-dimensional directions arranged on a chemical retainer on both the upper and lower sides of the chemical retainer....

Similarly, the phrase "hereinafter simply referred to as "supportive connecting chemical-retaining fibers" renders the claim indefinite as well and should be corrected accordingly.

5. Regarding claims 1, 2 and 10-12, the phrase "mesh-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "mesh-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). Appropriate action is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-9 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Rehil (U.S. Patent No. 6,398,835).

Rehil discloses a chemical volatilization device (column 7, lines 1-5) for rotating a chemical retainer (Figure 2) made of fibers as a material with a rotary drive device based on employing a chemical retainer comprising:

A chemical mesh fiber (14) in the form of a regular mesh in two-dimensional directions arranged on a chemical retainer on both the upper and lower sides of the chemical retainer (Figure 2),

A plurality of supportive connecting chemical retaining fibers of twisted threads (concerning claim 2; column 6, lines 60-68) arranged between the chemical mesh fibers on the upper and lower sides formed in individual mesh units, which support and connect the chemical-retaining fibers on both the upper and lower sides at a predetermined interval (column 6, lines 25-40) as a result of having a bending elasticity (columns 4-7; Figures 1-5).

With regard to claims 3, 4, 7 and 14-16, Rehil continues to disclose that the supportive connecting chemical-retaining fibers form a columnar structure by being arranged roughly parallel in the vertical direction, and form a diagonal structure by being arranged in the state of intersecting on an angle in the vertical direction as shown in Figure 4. Furthermore, Rehil discloses that the diagonal structure is formed so as to connect sides together located on the same side and opposite sides based on all four directions in mesh units corresponding to the upper and lower sides as shown in Figure 4 as well (concerning claims 5, 6, 8 and 9).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1797

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rehil (U.S. Patent No. 6,398,835) in view of Pulek et al. (U.S. Patent No. 6,391,200).

10. Rehil is relied upon as set forth above. Rehil does not appear to disclose small gap chemical retaining fibers, which have a smaller gap than the mesh and which are connected to the mesh fibers on both sides and are arranged between the mesh fibers on the upper and lower sides. However, such a configuration is extremely well known as it aides in the purification process. Pulek discloses an air purification apparatus that is capable of dispensing a volatile chemical, wherein the apparatus comprises a first and second set of chemical retaining fibers as well as a small gap chemical retaining fiber that is connected to the mesh fibers on both sides and arranged between the mesh fibers on the upper and lower sides (column 3, lines 50-65; column 4, lines 8-30). The small gap fibers provide for optimal use of the filter to trap microscale contaminants while lowering the pressure drop across the apparatus. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Rehil to include a small gap chemical retaining fiber that is connected to the mesh fibers on both sides and arranged between the mesh fibers on the upper and lower sides in order to provide for optimal use of the filter to trap microscale contaminants while lowering the pressure drop across the apparatus as exemplified by Pulek.

11. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rehil (U.S. Patent No. 6,398,835).

Rehil is relied upon as set forth above. Rehil does not appear to disclose a plurality of chemical retainers consisting of chemical-retaining mesh fibers arranged on the upper and lower sides and the supportive connecting chemical retaining fibers arranged therebetween are overlapped. However, The Manual of Patent Examining Procedures discloses that in *In re Harza*, 274, F.2d 669, 124 USPQ 378 (CCPA 1960), a mere duplication of parts for a multiplied effect has no patentable significance unless a new and unexpected result is produced (See MPEP 2144.04). As such the claimed plurality of chemical retainers is not patentably distinct from Rehil.

Furthermore, Claim 12 further requires that the distance between the chemical retaining mesh fibers on both sides is 1.0 to 10.0 mm. It would have been well within the purview of one of ordinary skill in the art to optimize the distance of the chemical-retaining mesh fibers in order to maximize the efficiency and effectiveness of the purification process. Only the expected results would be attained.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rehil (U.S. Patent No. 6,398,835) in view of Scoggins (U.S. Patent No. 4,750,863).

Rehil is relied upon as set forth above. Rehil does not appear to disclose that the filter arrangement is provided with a protective casing housing the chemical retainer, which surrounds the outer circumference of the retainer with a plurality of rings and a bearing located in the center that is capable of engaging with a rotating shaft. Scoggins discloses a filter arrangement (Figure 1) with a chemical retainer (6) that is utilized with a rotary device in order to purify a fluid and dispel said fluid with a fan (column 1, lines

Art Unit: 1797

5-45). The reference continues to disclose that the arrangement is provided with a protective casing housing the chemical retainer, which surrounds the outer circumference of the retainer with a plurality of rings and a bearing located in the center that is capable of engaging with a rotating shaft (Figures 1, 2 and 4). Such a configuration is utilized in order to employ the filter arrangement with a ceiling fan (column 1, lines 20-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a protective casing housing the chemical retainer, which surrounds the outer circumference of the retainer with a plurality of rings and a bearing located in the center that is capable of engaging with a rotating shaft in order to employ said arrangement with a ceiling fan as exemplified by Scoggins.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN C. JOYNER whose telephone number is (571)272-2709. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth L McKane/
Primary Examiner, Art Unit 1797

KCJ